

APPARATUS AND METHOD FOR THERMALLY CYCLING SAMPLES OF BIOLOGICAL MATERIAL WITH SUBSTANTIAL TEMPERATURE UNIFORMITY

ABSTRACT

An apparatus for thermally cycling samples of a biological material including a thermal block assembly including a plurality of sample holders for receiving samples of biological material; a heat sink thermally coupled to the thermal block assembly, the heat sink transferring heat away from the thermal block assembly to ambient air in contact with the heat sink; a first heat source thermally coupled to the thermal block assembly to provide heat to the thermal block assembly; and a second heat source thermally coupled to the first heat source and configured to provide heat to a portion of the first heat source. The arrangement of the heat sink, first heat source and second heat source can provide substantial temperature uniformity among the plurality of sample holders. The invention also includes a method for thermally cycling samples of biological material.